

We Claim:

1 1. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
5 over a plurality of communications media, said system
including:

 (a) a first means for establishing a
IP communications link between a customer
10 and a company web server;

 (b) a second means for determining
resource availability at said call center
for said customer, and identifying an agent
15 at said call center available to
communicate with said customer;

 (c) a third means for establishing a
second communications link between call
20 center and said customer;

 (d) a contact server for managing and
synchronizing simultaneous IP
25 communications between:

 (i) said web server and said call
center, and;

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1 (ii) said web server and said
customer;

5 whereby said agent and said customer
may each view said IP communications links
while communicating with each other over
said second communications link.

2. In a communications network, a system
for establishing and maintaining communications
10 between a customer and a business having a call center
as claimed in claim 1, wherein said third means
includes a telephony automatic call director and a
telephony server

15 3. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
20 as claimed in claim 2, wherein said contact server
communicates with said automatic call director through
said telephony server.

4. In a communications network, a system
25 for establishing and maintaining communications
between a customer and a business having a call center
as claimed in claim 1, wherein said IP communications

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includes a link which enables a customer to request a
1 call back if an agent is not available.

5 5. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
as claimed in claim 1, wherein said third means
enables communication with said customer with a
communications protocol selected from the group of
10 broadband telephony, TCP/IP, SMTP, chat, internet
telephony or internet video.

15 6. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
as claimed in claim 1, wherein said system includes a
data base server to authenticate a customers
20 entitlements at said call center.

25 7. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
as claimed in claim 4, wherein said second means
includes a data base server to match the
qualifications of a call center agent to a customers
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call back request.

1 8. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
5 as claimed in claim 1 wherein said system further
includes a data base server for providing access to
data relating to services provided by the company to
the customer.

10 9. In a communications network, a system
for establishing and maintaining communications
between a customer and a business having a call center
as claimed in claim 1, wherein said system further
15 includes first and second linked web servers separated
by a security means, with said first web server
communicating with said agent, and said second web
20 server communicating with said customer, said second
web server providing at least one Java applet to said
customer over said IP communications link.

25 10. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center over a plurality
of communications media, said method comprising the

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steps of:

1 (a) establishing a html
communications link between a customer and
a company web server which enables the
5 customer to request a call back;

 (b) determining resource availability
at said call center for said customer, and
identifying an agent at said call center
10 available to communicate with said
customer;

 (c) establishing a second
communications link between call center and
15 said customer;

 (d) managing and synchronizing
simultaneous html communications between:

20 (i) said web server and said call
center, and;

 (ii) said web server and said
customer;

25 whereby said agent may communicate with
said customer over said second
communications link while each views said

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simultaneous html communications links.

1 11. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center as claimed in
5 claim 10, wherein said step of establishing said
second communications link includes establishing a
telephony link with said customer.

10 12. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center as claimed in
claim 10, which further includes the step of enabling
15 the customer to request a call back from an agent if
an agent is not available.

20 13. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center as claimed in
claim 10, wherein said step of establishing a second
communication link enables communication with said
customer with a communications protocol selected from
25 the group of broadband telephony, TCP/IP, SMTP, chat,
internet telephony or internet video.

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14. In a communications network, a method
1 for establishing and maintaining communications
between a customer and a call center as claimed in
claim 10, which further includes the step of
5 authenticating a customers entitlements at said call
center..

15. In a communications network, a method
for establishing and maintaining communications
10 between a customer and a call center as claimed in
claim 10, wherein said method further includes the
step of matching the qualifications of a call center
agent to a customers call back request.
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16. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center as claimed in
20 claim 10, which further includes the step of providing
customer and agent access to data relating to services
provided by the company to the customer.

17. In a communications network, a method
25 for establishing and maintaining communications
between a customer and a call center as claimed in
claim 16, which further includes the step of providing

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1 access to data relating to trouble tickets on services
provided by the company to the customer.

5 18. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center as claimed in
claim 10, which further includes the step of
synchronizing first and second web servers with fixed
10 IP addressed to provide security for company data,
with said first web server communicating with said
agent, and said second web server communicating with
said customer.

15 19. In a communications network, a method
for establishing and maintaining communications
between a customer and a call center as claimed in
claim 18, which further includes the step of
communicating at least one Java applet from said
20 second web server to said customer over said IP
communications link.

25 20. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis, said communication
enabled over a plurality of communications media, said

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system including:

1 (a) a first means for establishing a
html communications link between a customer
and a company web server;

5 (b) an http communications means for
enabling a customer to request a call back
from said call center;

10 (c) a second means for determining
resource availability at said call center
for said customer, and identifying an agent
at said call center available to
communicate with said customer;

15 (d) a third means for establishing a
call back communications link between said
call center and said customer;

20 whereby a call center agent may
establish a call back communications link
with said customer in response to the
customer's http request.

25 21. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim

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20, wherein said third means includes a telephony
1 automatic call director and a telephony server to
facilitate communication from said call center to said
customer.

5 22. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
20, wherein said third means enables communication
10 with said customer with a communications protocol
selected from the group of broadband telephony,
TCP/IP, SMTP, chat, internet telephony or internet
video.

15 23. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
20 20, wherein said second means includes a contact
server to match the qualifications of a call center
agent to a customers call back request.

24. In a communications network, a system
25 for continuing communication between a customer and a
call center on a call back basis as claimed in claim
23, wherein said contact center reserves a qualified

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call center agent for call back services.

1 25. In a communications network, a method
for continuing communication between a customer and a
company call center on a call back basis, said
5 communication enabled over a plurality of
communications media, said method including the steps
of:

10 (a) establishing a IP communications
link between a customer and a company web
server;

15 (b) downloading an http
communications means to said customer to
enable a customer to request a call back
from the call center;

20 (c) determining resource availability
at the call center for said customer, and
identifying an agent at said call center
available to communicate with said
customer;

25 (d) establishing a call back
communications link between said call
center and said customer;

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1 whereby a call center agent may
establish a call back communications link
with said customer in response to the
customer's http call back request.

5 26. In a communications network, a method
for continuing communication between a customer and a
company call center on a call back basis as claimed in
10 claim 25, which further includes the step of matching
the qualifications of a call center agent to a
customers call back request.

15 27. In a communications network, a method
for continuing communication between a customer and a
company call center on a call back basis as claimed in
claim 25, which further includes the step of reserving
20 a qualified call center agent for call back to the
customer.

25 28. In a communications network, a method
for continuing communication between a customer and a
company call center on a call back basis as claimed in
claim 25, wherein said agent establishes said call

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1 back communications link via telephony through an
telephony automatic call director and a telephony
server.

5 29. In a communications network, a method
for continuing communication between a customer and a
company call center on a call back basis as claimed in
claim 25, wherein agent establishes said call back
10 communications link with a communications protocol
selected from the group of broadband telephony,
TCP/IP, SMTP, chat, internet telephony or internet
video.

15 30. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis, said communication
enabled over a plurality of communications media, said
20 system including:

(a) a first means for establishing a
html communications link between a customer
and a company web server and enabling a
25 call back request by the customer;

(b) a second means for determining
resource availability at said call center

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1 for said customer and said call back
request, and identifying an agent at said
call center available to communicate with
said customer;

5 (c) a third means for establishing a
call back communications link between said
call center and said customer;

10 (d) a contact server for managing and
synchronizing simultaneous html
communications between:

15 (i) said web server and said call
center, and;

 (ii) said web server and said
customer:

20 whereby said agent establish a call
back communications link with said customer
while said contact server synchronizes said
simultaneous html communications links
between said web server and customer, and
25 said web server and said agent.

31. In a communications network, a system
for continuing communication between a customer and a

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1 call center on a call back basis as claimed in claim
30 in which said customer call back request is
triggered by running a Java applet embedded in the
html communication to the customer.

5 32. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
31 in which an agent is reserved for said customer
10 call back request when an agent not available at the
time the request is entered by the customer.

15 33. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
30 in which said third means includes a telephony
automatic call director and a telephony server managed
20 by a contact server.

34. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
25 30 wherein said third means enables communication with
said customer with a communications protocol selected
from the group of broadband telephony, TCP/IP, SMTP,

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chat, internet telephony or internet video.

1 35. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
5 30 wherein said second means includes a data base
server to match the qualifications of a call center
agent to a customers call back request.

10 36. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
30 wherein said system further includes a data base
15 server for providing access to data relating to
services provided by the company to the customer.

 37. In a communications network, a system
for continuing communication between a customer and a
20 call center on a call back basis as claimed in claim
36 wherein said data base server provides access to
the current status of trouble tickets filed by the
customer with the company.

25 38. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim

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30 wherein said system further includes first and
1 second linked web servers separated by a security
means, with said first web server communicating with
said agent, and said second web server communicating
5 with said customer.

39. In a communications network, a system
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
10 38 said second web server downloads at least one Java
applet to said customer at the time said html
communications link is established.

40. In a communications network, a method
15 for continuing communication between a customer and a
call center on a call back basis, said call back
communications enabled over a plurality of
20 communications media, said method comprising the steps
of:

(a) establishing a html
communications link between a customer and
25 a company web server which enables the
customer to request a call back;

(b) determining resource availability

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1 at said call center for said customer, and
identifying an agent at said call center
available for call back communication with
said customer;

5 (c) establishing a second
communications link between call center and
said customer;

10 (d) managing and synchronizing
simultaneous html communications between:

(i) said web server and said call
center, and;

15 (ii) said web server and said
customer;

whereby said agent may communicate with
said customer over said second
20 communications link while each views said
simultaneous html communications links.

41. In a communications network, a method
for continuing communication between a customer and a
25 call center on a call back basis as claimed in claim
40, said method comprising the step of triggering said
customer call back request by running a Java applet

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1 embedded in an html communication received by the
customer.

5 42. In a communications network, a method
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
40, said method comprising the steps of reserving a
call back agent for said customer call back request
when an agent is not available at the time the request
10 is entered by the customer.

15 43. In a communications network, a method
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
40, said method comprising the steps of establishing a
telephony communications link through a telephony
server managed by a contact server.

20 44. In a communications network, a method
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
40 wherein said agent establishes communication with
25 said customer with a communications protocol selected
from the group of broadband telephony, TCP/IP, SMTP,
chat, internet telephony or internet video.

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45. In a communications network, a method
1 for continuing communication between a customer and a
call center on a call back basis as claimed in claim
40 which further includes the step of matching the
5 qualifications of a call center agent to a customers
call back request.

46. In a communications network, a method
for continuing communication between a customer and a
10 call center on a call back basis as claimed in claim
40 which further includes the step of providing access
to data relating to services provided by the company
to the customer.

15. 47. In a communications network, a method
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
20 40, said method comprising the steps of providing
access to the current status of trouble tickets filed
by the customer with the company.

48. In a communications network, a method
25 for continuing communication between a customer and a
call center on a call back basis as claimed in claim
40, said method comprising the steps of linking first

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and second web servers through a security protocol,
1 with said first web server communicating with said
agent, and said second web server communicating with
said customer.

5 49. In a communications network, a method
for continuing communication between a customer and a
call center on a call back basis as claimed in claim
40, said method comprising the steps of downloading at
10 least one Java applet to said customer at the time
said html communications link is established.

15 50. A contact server for managing
communications between a customer and a company,
wherein said customer has http access to a company
http web server, and said company has a customer call
center having a telecommunications telephony server,
20 said system including:

(a) a first means for establishing a
http communications link between the
customer and the company http web server,
25 which link requests an additional
communication from said company call
center;

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1 (b) second means for determining
resource availability at said call center
for said customer, and identifying an agent
at said call center available to
5 communicate with said customer;

(c) a data link between said contact
server and said telecommunications
telephony server to enable said agent in
10 said call center to establish a telephony
communications link with said customer;

(d) said contact server managing and
synchronizing simultaneous html
15 communications between:

(i) said web server and said call
center, and;

20 (ii) said web server and said
customer;

whereby said agent and said customer may
each view said html communications links while
25 simultaneously communicating with each other over said
telephony communications link.

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51. A contact server for managing
1 communications between a customer and a company as
claimed in claim 50, said server receiving a call back
request from said html communications link and
5 notifies said telecommunications telephony server if
an agent is available.

52. A contact server for managing
communications between a customer and a company as
10 claimed in claim 50, said server receiving a call back
request from said html communications link and
reserves a an agent for future communications if an
agent is available.
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53. A contact server for managing
communications between a customer and a company as
claimed in claim 51, wherein said contact server
20 matches a set of qualifications with a customer's
requirements prior to notifying said
telecommunications telephony server.

54. A contact server for managing
25 communications between a customer and a company as
claimed in claim 51, wherein said contact server
matches a set of customer entitlements with a set of

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entitlements maintained for a customer's IP address
1 prior to notifying telecommunications telephony
server.

5 55. A contact server for managing
communications between a customer and a company as
claimed in claim 51, wherein said contact server also
synchronizes an additional IP link to a call center
manager.

10 56. A contact server for managing
communications between a customer and a company as
claimed in claim 51, wherein said contact server may
also synchronize an additional IP communications link
15 with said customer with a communications protocol
selected from the group of broadband telephony,
TCP/IP, SMTP, chat, internet telephony or internet
20 video.

57. A method of managing communications
between a customer and a company, wherein said
customer has http access to a company http web server,
25 and said company has a customer call center having a
telecommunications telephony server, said method
comprising the steps of:

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1 (a) establishing a http
communications link between the customer
and the company http web server, which link
receives a request from a customer for an
5 additional communication from said company
call center;

(b) determining resource availability
at said call center for said customer, and
10 identifying an agent at said call center
available to communicate with said
customer;

15 (c) initiating a data link to the
telecommunications telephony server to
enable said agent in said call center to
establish a telephony communications link
20 with said customer;

(d) managing and synchronizing
simultaneous html communications between:

25 (i) said web server and said call
center, and;

(ii) said web server and said
customer;

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1 while simultaneously managing the data
link with the telecommunications telephony
server;

5 whereby said agent and said customer
may each view said html communications links while
communicating with each other over said telephony
communications link.

10 58. A method of managing communications
between a customer and a company as claimed in claim
57 which method further comprises the step of
receiving a call back request from said html
15 communications link and notifying said
telecommunications telephony server if an agent is
available.

20 59. A method of managing communications
between a customer and a company as claimed in claim
57 which method further comprises the step of
receiving a call back request from said html
communications link and reserving an agent for future
25 communications if an agent is available.

30 60. A method of managing communications
between a customer and a company as claimed in claim

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57 which method further comprises the step of matching
1 a set of qualifications with a customer's requirements
prior to notifying said telecommunications telephony
server.

5 61. A method of managing communications
between a customer and a company as claimed in claim
57 which method further comprises the step of matching
a set of customer entitlements with a set of
10 entitlements maintained for a customer's IP address
prior to notifying telecommunications telephony
server.

15 62. A method of managing communications
between a customer and a company as claimed in claim
57 which method further comprises the step of
synchronizing an additional IP link to a call center
20 manager.

63. A method of managing communications
between a customer and a company as claimed in claim
25 57 which method further comprises the step of
synchronizing an additional IP communications link
with said customer with a communications protocol

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selected from the group of broadband telephony,
1 TCP/IP, SMTP, chat, internet telephony or internet
video.

64. An interactive method of synchronizing
5 web page displays between a customer and company
support personnel at a plurality of locations over a
TCP/IP communications link, wherein said customer and
said support personnel have push/pull http access to a
10 company http web server said method comprising the
steps of:

(a) establishing a http
communications link between the customer
15 having a known IP address and the company
http web server, which link receives a
request from a customer for an additional
communication with company support
20 personnel;

(b) relaying said known IP address to
said company support personnel

25 (c) registering the company support
personnel with a contact server using the
customers IP address, and establishing a

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synchronizing data link between said web
server and said contact server;

(d) replicating connections by IP
address on said contact server to enable
simultaneous displays of any requested html
data page or URL at each location. and
simultaneous execution of any local Java
applets associated with said html data page
or new URL.

65. An interactive method of synchronizing
web page displays between a customer and company
support personnel at a plurality of locations over a
TCP/IP communications link as claimed in claim 64
which further includes the step of replicating
connections by IP address on said contact server to
enable simultaneous execution of any local Java
applets associated with said html data page.

66. An interactive method of synchronizing
web page displays between a customer and company
support personnel at a plurality of locations over a
TCP/IP communications link as claimed in claim 64
which further includes the step of replicating

connections by IP address on said contact server to
1 enable simultaneous execution and display of data
transmitted by a second IP communications link.

67. A system for synchronizing web page
5 displays viewed by a customer and company support
personnel at a plurality of locations over a TCP/IP
communications link, wherein said customer and said
support personnel have push/pull http access to a
10 company http web server said system comprising:

(a) a web server for establishing a
http communications link with a customer
15 having a known IP address, which link
receives a request from a customer for an
additional communication with company
support personnel;

(b) a contact server for matching
20 said customer to said company support
personnel and then registering the company
support personnel with the customers IP
25 address to establish a synchronous data
link between said web server and said
contact server;

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1 (c) means for replicating connections
by IP address on said contact server to
enable simultaneous displays of any
requested html data page or URL at each
5 location.

68. A system for synchronizing web page
displays viewed by a customer and company support
personnel at a plurality of locations over a TCP/IP
10 communications link as claimed in claim 67, wherein
said means for replicating connections by IP address
provides simultaneous execution of any local Java
applets associated with said html data page.
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69. A system for synchronizing web page
displays viewed by a customer and company support
personnel at a plurality of locations over a TCP/IP
20 communications link as claimed in claim 67, wherein
said system further synchronizes web page displays and
a second form of TCP/IP communications between a
customer and a call center agent over a TCP/IP
25 communications link.

70. A system for synchronizing web page
displays viewed by a customer and company support
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1 personnel at a plurality of locations over a TCP/IP
communications link as claimed in claim 68, wherein
said java applet triggers a call back request for a
call center agent over a telephony communications
5 link.

71. A system for synchronizing web page
displays viewed by a customer and company support
personnel at a plurality of locations over a TCP/IP
10 communications link as claimed in claim 68, wherein
said contact server reserves a call center agent if an
agent is not then available.

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